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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,015	04/08/2004	Yao-Ching Haung	CFP-015332 (20040118.ORI)	9305
23595	7590	02/10/2006	EXAMINER	
NIKOLAI & MERSEREAU, P.A. 900 SECOND AVENUE SOUTH SUITE 820 MINNEAPOLIS, MN 55402			SUTHAR, RISHI S	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/821,015	Applicant(s) HAUNG, YAO-CHING	
	Examiner Rishi Suthar	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Responsive to communication filed on 6 December 2005.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Nakagomi (U.S. Patent No. 4,884,091).

Nakagomi teaches in Fig. 2 an automatic diaphragm assembly comprising: a body (10) having a front (bottom, as viewed in Fig. 2), rear (top, as viewed in Fig. 2), a diaphragm chamber in the rear, and a distal through hole (12) through the bottom of the chamber; an aperture adjustment mechanism (3a, 3b); and an actuating device (100) mounted on the body.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 3, 5, 7, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagomi (U.S. Patent No. 4,884,091) in view of Akada et al. (U.S. Patent No. 5,689,746).

Nakagomi teaches the invention as claimed above, as well as a motor mount formed integrally from the front of the body; the actuating device comprises a motor mounted in the motor mount having a shaft extended toward the front of the body; an interface electrically connected to the motor and having an inner segment extended into the motor; a transverse rod attached to the motor shaft; and two driving studs attached at the ends of the transverse rod. Nakagomi et al. does not expressly disclose a current sensor mounted on the inner segment of the interface of the motor. Akada et al. teaches in Figs. 11a to 11c a light adjusting member driven by a motor (140) having a stator (143); an interface (145a-d); and a current sensor (145a-d). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the motor taught by Akada et al. to drive the adjustable diaphragm of Nakagomi since the presence of a current sensor in the motor allows for easy controlling of the amount of light passing through the diaphragm (Akada et al.; col. 1, lines 9-23).

Regarding claims 3, 5, 7, 8, and 9, the combination of Nakagomi and Akada et al. teach the body has two curved slots (Nakagomi; 15a, 15b); each of the driving studs has an outside end that is extended into and held into the curved slots (Nakagomi); each of the reciprocal blades has an overlapping segment and a driven arm (Nakagomi; 7a, 7b), and each driven arm has a longitudinal through hole (Nakagomi; 7a, 7b); an endcap (Nakagomi; 101) slidably mounted in the through hole of each one of the driven

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arms and attached to the driving stub in the aligned curved slot; the inward edge of each blades is defined in the overlapping section and has a V-shaped profile (Nakagomi); the motor is a step motor (Akada et al.); the current sensor comprises a Hall element (Akada et al.); and an end cover (Nakagomi; 110).

5. Claims 4, 6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagomi (U.S. Patent No. 4,884,091) in view of Akada et al. (U.S. Patent No. 5,689,746) as applied to claim 3 above, and further in view of Yamaguchi (U.S. Patent No. 5,764,292).

Nakagomi and Akada et al. teach the invention as claimed above in claim 3, but fail to disclose four positioning nubs and multiple transverse slots on the reciprocal blades. Yamaguchi discloses a conventional diaphragm assembly in Fig. 1 that has four positioning nubs (31a-d) on a base member (31), and each of the reciprocal blades (34, 35) has multiple transverse slots (34a, 34b, 35a, 35b) and each of the transverse slots holds a respective one of the positioning nubs. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide four positioning nubs and multiple transverse slots in the diaphragm assembly of Nakagomi and Akada et al. as taught by Yamaguchi since it is well known that the addition of two more slots and two more transverse slots can ensure a smooth and parallel operation of the reciprocal blades in the diaphragm assembly (Yamaguchi; col. 1, lines 33-47).

Regarding claims 6 and 10-12, the combination of Nakagomi, Akada et al. and Yamaguchi teach the inward edge of each blades is defined in the overlapping section

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and has a V-shaped profile (Nakagomi); the motor is a step motor (Akada et al.); the current sensor comprises a Hall element (Akada et al.); and an end cover (Nakagomi; 110).

Terminal Disclaimer

6. The terminal disclaimer filed on 6 December 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,922,030 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sato (U.S. Patent No. 5,196,940), Sato et al. (U.S. Patent No. 5,646,769), Sato et al. (U.S. Patent No. 5,749,015), Hara et al. (U.S. Patent No. 5,907,733), Sato (U.S. Patent No. 6,064,432), Senba (U.S. Patent Application Publication No. 2004/0189860), Watanabe et al. (U.S. Patent No. 6,924,946) and Kaneda (U.S. Patent No. 6,927,798) all disclose adjustable diaphragm assemblies with reciprocal blades.

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Telephone Numbers

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rishi Suthar whose telephone number is 571-272-8456. The examiner can normally be reached on M-Th 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William Perkey
Primary Examiner

Rishi Suthar
Examiner
Art Unit 2851

RS